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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,946	03/09/2000	TOKUNORI KATO	105489	2961

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

REITZ, KARL

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,946

Applicant(s)

KATO, TOKUNORI

Examiner

Karl R. Reitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/09/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. Figures 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (as stated in the 'brief description of the drawings' section; page 4 lines 15-18). See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because the 'YES' branch and the 'NO' branch are reversed out of S8 in figure 6 (it is stated on page 12 lines 19-22 that S6 and S7 are repeated when S8 is 'NO' and that S9 is occurs when S8 is 'YES', which contradicts the diagram). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 8 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (5,781,310) in view of Dennis (5,469,533).

6. In accordance with claims 1, 8 and 28, Nakamura discloses a copying system with a host device, a peripheral device and a printing device; in Nakamura's system, the controlling unit 3 (figure 2) acts as a host device, and is connected to the image inputting unit 1, which is a peripheral device, and an image outputting unit 2, which is a printing device (col. 4 lines 29-32).

7. Nakamura further discloses that the peripheral device contains a reading device that reads an image on an original document as image data; in Nakamura's system, image inputting unit 1 contains scanning means 61 for scanning an original sheet (col. 4 lines 34-35).

8. Nakamura further discloses that the peripheral device contains a converting device that converts that converts image data read by the reading device into printable data; in Nakamura's system, the scanned data is sent as an analog voltage signal from the color image sensor device 112 (figure 4A) to the A/D converter 116, which converts the signal into an 8-bit digital signal (col. 5 lines 38-44) data is then sent to the image outputting device 2 for output (col. 6 lines 14-15).

9. Nakamura further discloses that the peripheral device contains a first transmission device that transmits printer data to the host; in Nakamura's system, the controlling and communicating unit 10 (figure 1) sends image data to the transmission path 4, to which the image outputting unit 2 and the controlling unit 3 are also connected (figure 2 and col. 5 lines 1-4).

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10. Nakamura further discloses that the peripheral device contain a reception printing device that receives printable data and causes the printing device to print the printable data; in Nakamura's system, the image outputting unit 2, receives image data via controlling and communicating unit 20 (figure 4B and col. 6 lines 11-14) the data is then used to by the image outputting unit 2 to form a full color image (col. 6 lines 29-30). However, Nakamura does not disclose expressly that the printable data is received from the host device (instead it is received from the image inputting device 1) (col. 6 lines 13-14).

11. Dennis discloses that the peripheral device (printer 218 figure 1) contains a reception printing device to receive printable data from the host (computer 202) and to cause the printing device to print the data; in Dennis's system, data to be printed is generated by the application program 204, within the host, and transformed into printable bitmap data by the resource scheduler 216 and sent to the printer for printing (col. 8 lines 30-32 and col. 9 lines 8-26).

12. Nakamura further discloses that the system contains a storage device that stores various data; in Nakamura's system, a memory unit 6 is used to store image data (col. 14 lines 2-3 and figures 13 and 14). However, Nakamura does not disclose expressly that the storage device is in the host device.

13. Dennis further discloses that the host device contains a device to store data, namely a hard drive (col. 10 lines 9-12).

14. Nakamura further discloses that the system contains a reception control device that receives the printable data transmitted first transmission device and stores the

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printable data in the storage device; in Nakamura's system, printable data is received and stored by the memory unit 6 (col. 14 lines 2-3). Again however, Nakamura does not disclose expressly that the reception control device for the storage device is in the host device.

15. Dennis further discloses that the host device contains a device to store data, namely a hard drive (col. 10 lines 9-12).

16. Nakamura further discloses that the system contains a second transmission device that transmits to the peripheral device the printable data stored in the storage device; in Nakamura's system, when required for printing, image data stored in the memory unit 6, is transferred to the image outputting unit 2 to print the data (col. 14 lines 8-13). However, Nakamura does not disclose expressly that the second transmission device is in the host device.

17. Dennis further discloses that the host device contains a transmission device to transmits data stored in the storage device to the peripheral device; in Dennis's system, the resource loader 214 controls the transmission of image data and resource information from the computer to the printer (col. 8 lines 63-67).

18. Nakamura and Dennis are combinable because they are from the same field of endeavor, namely image forming systems with host and peripheral devices.

19. Therefore, it would have been obvious to a person of ordinary skill in the art to allow the printable data to be received from the host device as taught by Dennis (instead of the image inputting device 1, as taught by Nakamura), to incorporate the

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storage device within the host device as taught by Dennis, and to include the second transmission device in the host device, as taught by Dennis.

20. The motivation for doing so would have been to: a) to combine the image inputting unit 1 and image outputting unit 2 of Nakamura's so that the user only required one piece of equipment; and b) to eliminate the need of a independent storage device by incorporating the storage device and the second transmission device into the host device.

Claim Rejections - 35 USC § 102

21. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

22. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura.

23. In accordance with claim 24, Nakamura discloses a peripheral device capable of connecting to a host device; in Nakamura's system, the controlling unit 3 (figure 2) acts as a host device, and is connected to the image inputting unit 1 and an image outputting unit 2, which are peripheral devices (col. 4 lines 29-32).

24. Nakamura further discloses that the peripheral device contains a reading device that reads an image on an original document as image data; in Nakamura's system, the image inputting means 1 contains scanning means 61 for scanning an original sheet (col. 4 lines 34-35).

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25. Nakamura further discloses that the peripheral device contains a converting device that converts that converts image data read by the reading device into printable data; in Nakamura's system, the scanned data is sent as an analog voltage signal from the color image sensor device 112 (figure 4A) to the A/D converter 116, which converts the signal into an 8-bit digital signal (col. 5 lines 38-44) data is then sent to the image outputting device 2 for output (col. 6 lines 14-15).

26. Nakamura further discloses that the peripheral device contains a first transmission device that transmits printer data to the host; in Nakamura's system, the controlling and communicating unit 10 (figure 1) sends image data to the transmission path 4, to which the image outputting unit 2 and the controlling unit 3 are also connected (figure 2 and col. 5 lines 1-4).

27. Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura.

28. In accordance with claim 25, Nakamura discloses that the printing device performs color printing and the converting device converts image data into binary data corresponding to ink colors in the printing device; in Nakamura's system, the reading device 1 reads image data for each ink color (C, M, Y and K) (col. 5 line 65 – col. 6 line 3) then that data is sent to the image outputting device 2, which outputs the color image in accordance with the data corresponding to each color (C, M, Y and K) (col. 6 lines 29-31).

Claim Rejections - 35 USC § 103

29. Claims 2, 9 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis.

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30. In accordance with claims 2, 9 and 29, Dennis further specifies that the host device contain a sorting device to sort printable data stored in the storage device in an order of printing; in Dennis's system, the resource assembler 208 (figure 1) determines the most efficient sequence for printing the stored document (col. 8 lines 54-58).

31. Dennis further discloses that the second transmission device transmits the sorted printable data to the printing device; in Dennis's system, the resource loader 214 controls the transmission of image data and resource information from the computer to the printer, in accordance with the order determined by the resource assembler 208 (col. 8 lines 63-67).

32. Nakamura and Dennis are combinable because they are from the same field of endeavor, namely image forming systems with host and peripheral devices.

33. The motivation for doing so would have been to: a) to combine the image inputting unit 1 and image outputting unit 2 of Nakamura's so that the user only required one piece of equipment; and b) to eliminate the need of a independent storage device by incorporating the storage device and the second transmission device into the host device.

34. Claims 3, 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis in further view of Tabata (5,717,843).

35. In accordance with claims 3, 10 and 30, Nakamura discloses an input device, in the form of an operational keyboard, that allows the operator to input instructions (col. 6 lines 62-64). However, Nakamura does not disclose expressly that the device sort the printable data according to the operator's instructions.

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36. Tabata specifies allowing the input of a specific sorting order (col. 19 lines 60-63).

37. Tabata is combinable with Nakamura and Dennis because they are from the same field of endeavor, namely image forming apparatuses.

38. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to allow the copying system to have a specifiable sorting order as disclosed by Tabata.

39. The motivation for doing so would have been to allow the user to receive copied documents in the order he or she prefers as in Tabata's system (col. 19 lines 60-63).

40. Claims 4, 11, 18, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis in further view of Tabata.

41. In accordance with claims 4, 11, 18, 31 and 35, Tabata further specifies that the sorting device sort data in either a stack mode or a sort mode (col. 1 lines 53-55).

42. Tabata is combinable with Nakamura and Dennis because they are from the same field of endeavor, namely image forming apparatuses.

43. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to allow the copying system to sort the output in either a stack mode or a sort mode.

44. The motivation for doing so would have been to allow the user to receive copied documents in the order he or she prefers as in Tabata's system (col. 1 lines 53-55).

45. Claims 5, 12, 19 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis.

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46. In accordance with claims 5, 12, 19 and 36, Nakamura discloses that the printing device performs color printing and the converting device converts image data into binary data corresponding to ink colors in the printing device; in Nakamura's system, the reading device 1 reads image data for each ink color (C, M, Y and K) (col. 5 line 65 – col. 6 line 3) then that data is sent to the image outputting device 2, which outputs the color image in accordance with the data corresponding to each color (C, M, Y and K) (col. 6 lines 29-31).

47. Claim 6, 13, 22, 26 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis in further view of Vondran (5,717,507).

48. In accordance with claims 6, 13, 22, 26 and 37, neither Nakamura nor Dennis specifies that the converting device contain an ASIC.

49. Vondran specifies that the converting device contain an ASIC (col. 11 lines 1-3).

50. Vondran is combinable with Nakamura and Dennis because they are from the same field of endeavor, namely image data conversion for printing.

51. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to use an ASIC to perform image conversion as disclosed in Vondran (col. 11 lines 1-3).

52. The motivation for doing so would have been to "maximize the speed of color space conversion" (Vondran: col. 15 lines 13-14).

53. Claims 7, 14, 23, 27 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis in further view of Suzuki (5,381,246).

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54. In accordance with claims 7, 14, 23, 27 and 38, Nakamura discloses that the printing device (image outputting device 2) performs color printing using a plurality of inks; in Nakamura's system color printing is performed using CMYK inks (col. 6 lines 29-31). However, neither Nakamura nor Dennis specifies that the converting device converts image data into multi-value data corresponding to ink colors in the printing device.

55. Suzuki specifies that the converting device converts image data into multi-value data corresponding to ink colors in the printing device (col. 2 lines 27-31).

56. Suzuki is combinable with Nakamura and Dennis because they are from the same field of endeavor, namely image data processing.

57. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to allow the converting device to convert image data into multi-value data corresponding to ink colors in the printing device, as in Suzuki (col. 2 lines 27-31).

58. The motivation for doing so would have been to allow the apparatus to convert color images into corresponding color image data for printing.

59. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis.

60. The method steps of claim 15 are all performed by the means of Nakamura and Dennis's apparatuses as described above in claim 1. The reading step, converting step, transmitting step and receiving step performed at the peripheral device, are performed by the reading device (image inputting unit 1), the converting device (image

sensor device 112), the first transmission device (controlling and communicating unit 10), and the reception printing device (image outputting unit 2), respectively.

61. The receiving step, storing step and transmitting step performed at the host device, are performed by the reception printing device (resource scheduler 216), the reception control device (memory unit 6), and the second transmission device (resource loader 214), respectively.

62. Claims 16, 20 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis.

63. The method step of claims 16, 20 and 33 is performed by the means of Nakamura and Dennis's apparatuses as described above in claim 2. The sorting step is performed at by the sorting device (resource assembler 208).

64. Claim 17, 21 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis in further view of Tabata.

65. The method step of claims 17, 21 and 34 are all performed by the means of Nakamura and Dennis's apparatuses as described above in claim 3. The inputting step is performed at by the inputting device.

66. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Dennis.

67. In accordance with claim 32, Nakamura discloses using software to operate a copying system (col. 14 lines 28-30).

68. The copy program of claim 32 implements the method of claim 15. All the steps implemented by the copy program are performed in the method of claim 15. The

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reading step, converting step, first transmitting step, reception printing step, storage step, reception control step, and second transmission step of claim 32 are performed by the reading step, converting step, transmitting step and receiving step performed at the peripheral device, and the receiving step, storing step and transmitting step performed at the host device, respectively of claim 15.

Contact Information

69. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl R. Reitz whose telephone number is (703) 305-8696. The examiner can normally be reached on Monday-Friday 8:00-4:30.

70. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 305-7452. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

71. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.



KRR

**DAVID MOORE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**